General

Guideline Title

Nursing care of the woman receiving regional analgesia/anesthesia in labor. Second edition. Evidence-based clinical practice guideline.

Bibliographic Source(s)

Association of Women's Health, Obstetric and Neonatal Nurses (AWHONN). Nursing care of the woman receiving regional analgesia/anesthesia in labor. Second edition. Evidence-based clinical practice guideline. Washington (DC): Association of Women's Health, Obstetric and Neonatal Nurses (AWHONN); 2011. 69 p. [177 references]

Guideline Status

This is the current release of the guideline.

This guideline updates a previous version: Association of Women's Health, Obstetric and Neonatal Nurses (AWHONN). Nursing care of the woman receiving regional analgesia/anesthesia in labor. Evidence-based clinical practice guideline. Washington (DC): Association of Women's Health, Obstetric and Neonatal Nurses (AWHONN); 2001 Jan. 36 p. [72 references]

Regulatory Alert

FDA Warning/Regulatory Alert

Note from the National Guideline Clearinghouse: This guideline references a drug(s) for which important revised regulatory and/or warning information has been released.

- March 22, 2016 – Opioid pain medicines : The U.S. Food and Drug Administration (FDA) is warning about several safety issues with the entire class of opioid pain medicines. These safety risks are potentially harmful interactions with numerous other medications, problems with the adrenal glands, and decreased sex hormone levels. They are requiring changes to the labels of all opioid drugs to warn about these risks.

Recommendations

Major Recommendations

Note from the National Guideline Clearinghouse (NGC): Referenced rationale and quality of evidence ratings for each recommendation are provided in the original guideline document.

Preanesthesia Preparation

Expected Outcome: The registered nurse (RN), in collaboration with the anesthesia and obstetric care providers, will assess the woman's knowledge of regional analgesia/anesthesia, prepare her, and intervene as needed to minimize untoward effects.

Assessment

1. Assess the laboring woman's level of pain and her desire for nonpharmacologic and pharmacologic approaches to pain relief.
2. Determine the woman's knowledge and concerns about regional analgesia/anesthesia. Involve the woman's partner and family when appropriate.
3. Assess maternal baseline blood pressure, pulse, respiratory rate, and temperature.
4. Assess oral intake of fluids and limit oral fluids to modest amounts of clear liquids for women with uncomplicated labor. Such liquids may include isotonic sports drinks, ice chips, water, fruit juices without pulp, black tea, and coffee.
5. Assess oral intake of solid food. Follow institutional policy for oral intake of solid food during labor.
6. The licensed anesthesia care provider undertakes catheter placement.

Intervention

1. Provide education about various analgesia/anesthesia options as needed.
2. Notify the obstetric and anesthesia care providers of the woman's request for regional analgesia/anesthesia.
3. Obtain a platelet count as requested by the anesthesia provider.
4. Obtain blood type and screen or blood crossmatch as requested by the anesthesia provider.
5. Obtain a fetal heart rate (FHR) tracing prior to initiation of analgesia or anesthesia.
6. Continue assessing FHR during catheter placement if possible.
7. If a FHR tracing is identified as indeterminate or abnormal, initiate intrauterine resuscitation as needed and notify the obstetric and anesthesia care providers.
8. Instruct or assist the woman to empty her bladder prior to initiation of regional analgesia/anesthesia.
9. Insert an intravenous (IV) catheter and provide IV preload fluids as ordered.
    - Ideally, when IV fluid preload is ordered, it should be administered within approximately 20–30 minutes to ensure optimal prophylactic efficacy.
10. Ensure necessary emergency equipment and drugs are available per institutional guidelines and/or anesthesia provider request.
11. Conduct a preprocedure verification process according to facility policy and procedure, including relevant documentation (e.g., informed consent for the procedure, nursing assessment, preanesthesia assessment), diagnostic test results (e.g., blood work), and any required blood products or special equipment for the procedure.
12. Conduct a time out before the procedure and document completion of this procedure.
13. Provide 1:1 nursing care during initiation of regional anesthesia and for the first 30 minutes thereafter.
14. Assist the anesthesia provider in positioning the woman for the procedure:
    a. Positions for initiating the procedure may include the lateral position or sitting with the feet, elbows, and knees supported and head flexed forward.
    b. After the anesthesia/analgesia has been initiated, facilitate left or right lateral positioning to avoid aorta and inferior vena cava compression that may occur in the supine position.
15. Encourage and assist the woman with breathing and relaxation techniques during the procedure as needed.
16. If the woman is using patient-controlled epidural analgesia (PCEA):
    a. Reinforce teaching initiated by the licensed anesthesia care provider regarding the use of the PCEA device.
    b. Instruct the woman to notify the nurse or anesthesia care provider of any unusual sensations following a demand dose, including the sensation of dense motor blockade.

Immediate Postprocedure and Ongoing Maternal and Fetal Assessment

Expected Outcome: The RN, in collaboration with the anesthesia care provider, will assess the maternal and fetal response to regional analgesia and intervene promptly as needed to minimize untoward effects.

Initial Catheter Placement

Assessment

1. In collaboration with the anesthesia care provider, assess the effectiveness of the anesthesia/analgesia and for the presence of side effects or adverse reactions (See "Assessment and Management of Maternal Side Effects and Complications," below).

2. Monitor for intravascular injection of local anesthetic.

Intervention

If intravascular injection occurs:

- Call for help and notify the anesthesia and obstetric care providers and
- Protect the airway and administer medications and IV fluids as ordered

Blood Pressure

Maternal hypotension can be defined as a systolic blood pressure (BP) less than 100 mmHg or a 20%–30% decrease in systolic BP from preanesthesia baseline levels.

Assessment

1. Assess maternal BP after the initiation or re-bolus of a regional block, including PCEA. Blood pressure may be assessed every 5 minutes for the first 15 minutes, and then repeated at 30 minutes and at 1 hour after the procedure. More or less frequent monitoring may be indicated based on consideration of factors such as the type of analgesia/anesthesia, route and dose of medication used, the maternal–fetal response to medication, maternal–fetal condition, the stage of labor, and facility protocol.
2. The frequency of subsequent BP assessment should be based on consideration of the variables listed above.
3. Assess pulse and respiratory rate consistent with the frequency of BP assessment.
4. Consider periodic assessment of maternal oxygen saturation for selected women at high risk or those who receive neuraxial opioids as indicated and per facility protocol.

Intervention

1. To maintain maternal BP and minimize hypotension:
    a. Facilitate lateral or upright position with lateral uterine displacement and avoid the supine position.
    b. Maintain maternal uterine displacement using one or more of the following:
        - Hip wedge
        - Lateral position
        - Semi-Fowler's position with adequate uterine displacement

2. Interventions for hypotension may include the following:
    a. Lateral positioning
    b. Administration of additional non-glucose-containing crystalloid IV fluid bolus as ordered
    c. Administration of IV ephedrine/phenylephrine as ordered or per facility protocol.
    d. Notification of anesthesia and/or obstetric care provider as the woman's condition warrants if maternal hypotension does not resolve with position change and IV fluid bolus.

Fetal Status

Assessment

1. Assess the FHR after the initiation or re-bolus of a regional block. The FHR may be assessed every 5 minutes for the first 15 minutes. More or less frequent monitoring may be indicated based on consideration of factors such as the type of analgesia/anesthesia, route and dose of medication used, the maternal–fetal response to medication, maternal–fetal condition, the stage of labor, and facility protocol.
2. The frequency of subsequent assessments should be based on consideration of the variables listed above.

Intervention

1. Initiate intrauterine resuscitative measures, such as maternal position change, an IV fluid bolus, and oxygen administration at 10 L via non-rebreather face mask, if indeterminate or abnormal FHR patterns are identified.
2. Notify obstetric and anesthesia care providers as needed when indeterminate or abnormal FHR patterns are identified.

Uterine Activity

Assessment

1. Assess uterine activity after the initiation or re-bolus of a regional block, including PCEA. Uterine activity may be assessed every 5 minutes for the first 15 minutes. More or less frequent monitoring may be indicated based on consideration of factors such as the type of analgesia/anesthesia, route and dose of medication used, the maternal–fetal response to medication, maternal–fetal condition, the stage of labor, and facility protocol.
2. The frequency of subsequent assessment should be based on consideration of the variables listed above.

Intervention

1. Initiate measures, such as maternal repositioning and an IV fluid bolus, to reduce excessive uterine activity. If these measures do not resolve excessive uterine activity, consider decreasing or discontinuing oxytocin (if infusing) and/or administering terbutaline 0.25 mg subcutaneously.
2. Notify obstetric and anesthesia care providers as needed when excessive uterine activity and related indeterminate or abnormal FHR patterns occur.

Pain

Assessment

1. Evaluate maternal pain levels using assessment techniques such as visual or verbal analogue scales or other pain assessment tools.
2. Evaluate the woman's ability to cope with labor following administration of regional analgesia/anesthesia.

Intervention

1. Notify the anesthesia care provider when the woman has inadequate pain relief after regional analgesia/anesthesia administration.
2. Provide comfort and support measures as indicated.

Pruritus

Monitor for pruritus, particularly during the first hour after medication administration. (See "Assessment and Management of Maternal Side Effects and Complications," below.)

Sedation

Assess for sedation if an opioid medication is administered with local analgesia.

Motor Blockade

Assess the level of motor blockade throughout the period of analgesia, ideally using standardized screening or assessment criteria.

Assessment and Management of Maternal Side Effects and Complications

Expected Outcome: The RN, in collaboration with the anesthesia care provider, will assess the maternal and fetal responses to regional analgesia to minimize and manage side effects.

Pruritus

Assessment

Assess for the presence and severity of itching by patient description or visual scale.

Intervention

If the woman experiences severe pruritus or pruritus that does not resolve within approximately 1 hour, notify the anesthesia care provider and administer medication to alleviate itching as ordered.

Nausea/Emesis

Assessment

Monitor for nausea and vomiting postprocedure and following additional bolus doses of medication.

- Assess maternal blood pressure when the woman reports nausea and vomiting in the presence of neuraxial blockade.

Intervention

1. Carry out supportive nursing and safety measures to prevent aspiration if vomiting occurs.
2. Administer medications as ordered.
3. Notify anesthesia care provider as necessary or for severe nausea and vomiting.

Headache

Assessment

Assess for the following symptoms of postdural puncture headache after regional block administration:

- Pain that increases in the upright position and may decrease in the horizontal position
- Pain that may be relieved by abdominal compression
- Pain in the frontal and occipital regions
- Pain radiating to neck
- Stiff neck
- Nausea/vomiting
- Ocular symptoms, such as photophobia, diplopia, difficulty in accommodation
- Auditory symptoms, such as hearing loss, hyperacusis, tinnitus

Intervention

1. Provide one or more of the following nonpharmacologic interventions as indicated:
    a. Provide psychological support.
    b. Encourage the woman to rest in a horizontal position and avoid an upright position.
    c. Advise the woman to increase oral fluid intake unless contraindicated by other conditions.
2. Administer and monitor the effects of medications as ordered.
3. Prepare the woman for a blood patch procedure when indicated and as ordered.

Urinary Retention

Assessment

Assess for urinary retention and bladder distension by observation and palpation.

Intervention

Assist the woman to void. Perform intermittent urinary catheterization using a straight catheter if she is unable to void spontaneously.

Intravascular Injection

Assessment

Following administration of regional analgesia/anesthesia, assess for signs of intravascular injection including:

a. Tinnitus
b. Metallic taste in mouth
c. Perioral paresthesia
d. Restlessness
e. Dizziness
f. Sudden loss of consciousness
g. Seizure
h. Elevated blood pressure
i. Progression of cardiac signs (e.g., bradycardia, tachycardia, ventricular fibrillation, cardiac arrest)

Intervention

1. Initiate emergency care procedures:
    a. Stop injection if still being administered.
    b. Call for help.
    c. Maintain the airway with positioning and using bag and mask as needed.

d. Administer 100% oxygen.
e. Assist with intubation and mechanical ventilation as indicated.
f. Control seizures with benzodiazepines or barbiturates as ordered.
g. Monitor cardiovascular status.
h. If cardiorespiratory arrest occurs, begin cardiopulmonary resuscitation (CPR)/advanced cardiac life support (ACLS), with the following special considerations:
    - Ensure that the woman is positioned in left lateral position, either by manual displacement of the uterus, or with an appropriate wedge when available at a tilt of approximately 27–30 degrees.
    - Assess the need to perform chest compressions at a slightly higher level to accommodate elevation of the diaphragm by the uterus.
    - Help ensure that endotracheal intubation is performed by the most experienced provider whenever possible.

2. If standard emergency care protocols are unsuccessful, consider treatment with lipid emulsion:
    a. In the event of local anesthetic-induced cardiac arrest that is unresponsive to standard therapy, consider administration of Intralipid 20% IV while CPR continues.
    b. One suggested lipid emulsion treatment protocol is as follows:
        - Administer Intralipid 20%, 1.5 mL/kg IV bolus (100 mL for a 70-kg, or 154-lb, patient).
        - Follow the initial bolus with IV infusion of 0.25 mL/kg per minute.
        - Continue chest compressions to allow circulation of the lipid.
        - The IV bolus may be repeated every 3–5 minutes up to a total of 3 mL/kg until circulation is restored.
        - Continue the infusion until hemodynamic stability is reestablished.
        - A maximum total dose of 8 mL/kg during the resuscitation period is recommended.

Assessment of Anesthesia Effects on Labor Progress

Expected Outcome: The RN will recognize potential implications of regional analgesia/anesthesia on labor progress and identify when alterations in labor progress may occur.

Assessment

Evaluate uterine activity and labor progress by assessing the following on a continuum:

a. Uterine activity, via palpation and electronic monitoring
b. Cervical dilation and effacement
c. Fetal descent

Intervention

1. Consider delaying pushing during the second stage of labor to allow the sensation of pressure to increase sufficiently to guide the woman's pushing efforts.
2. Assist the woman with pushing in the upright or lateral position to facilitate fetal descent and pushing effort.

Postanesthesia Care

Expected Outcome: The postpartum woman who received regional anesthesia/analgesia during labor will recover to preprocedure level of sensation and motor function and proceed to routine postpartum care.

Assessment

Women who have received regional analgesia shall receive appropriate postanesthesia care.

Intervention

1. Monitoring during the immediate postpartum period is dictated by type of birth, type of anesthesia, and presence of complications.
2. Blood pressure and pulse should be monitored at least every 15 minutes for 2 hours. More frequent monitoring for a longer period of time may be needed if complications occur.
3. Remove the epidural catheter intact when anesthesia is no longer necessary.
4. Document catheter removal.
5. Evaluate the postpartum woman's readiness to ambulate.

6. Discharge the woman from postanesthesia care when her condition has stabilized.

Care of the Newborn

Expected Outcome: The RN will assess the newborn and intervene to help facilitate the transition to extrauterine life following birth with regional analgesia/anesthesia.

Assessment

Routine assessment of the newborn — including assessment of temperature, heart rate, respiratory rate and characteristics, skin color, level of consciousness, muscle tone, and activity — should be documented at least every 30 minutes until the newborn's condition has remained stable for 2 hours.

Intervention

1. Support neonatal neurobehavioral organization and the coordination of autonomic, sensory, motor, and behavioral state systems.
2. Initiate neonatal resuscitation if necessary according to current guidelines.
3. Administer a narcotic antagonist as ordered for respiratory depression.
4. Support the postpartum woman's decision to breastfeed. Ideally, the first breastfeeding should occur within 1 hour of birth.

Clinical Algorithm(s)

None provided

Scope

Disease/Condition(s)

Labor and delivery

Guideline Category

Evaluation

Management

Treatment

Clinical Specialty

Anesthesiology

Nursing

Obstetrics and Gynecology

Pediatrics

Pharmacology

Intended Users

Advanced Practice Nurses

Allied Health Personnel

Health Care Providers

Hospitals

Nurses

Guideline Objective(s)

- To provide evidence-based clinical practice recommendations for nursing assessment and management of women undergoing obstetric neuraxial or regional analgesia/anesthesia
- To present guidelines for assessment and management of the woman and her fetus, including an assessment of pain relief, motor blockade, side effects, and potential adverse effects of medications
- To provide information about interventions directed at minimizing side effects and adverse reactions associated with regional analgesia and anesthesia and facilitating labor progress, along with information about the potential effects of regional analgesia and anesthesia on labor progress and newborn outcomes

Target Population

Pregnant women, who with their primary care providers and anesthesia care providers, have made informed decisions to undergo regional analgesia/anesthesia for intrapartum pain management and who have no identified contraindication for regional analgesia/anesthesia

Interventions and Practices Considered

1. Preanesthesia preparation
    - Assessing laboring woman's level of pain and desire for pain relief
    - Baseline maternal-fetal assessment and physical exam
    - Assessing oral intake of fluids and solid foods
    - Catheter placement and insertion, providing preload fluids as ordered
    - Patient education
    - Obtaining platelet count, blood type and screen, and fetal heart rate tracing as requested by anesthesia provider
    - Ensuring emergency equipment and drugs are available
    - Conducting a preprocedure verification process, including documentation
    - Provision of 1:1 nursing care, including positioning patient
2. Postprocedure maternal and fetal assessment:
    - Assessing anesthesia/analgesia effectiveness, including complications such as intravascular injection
    - Assessing maternal blood pressure, pulse, and respiratory rate; fetal status; uterine activity; pain
    - Managing hypotension or nonreassuring fetal heart rate patterns by repositioning, intravenous (IV) fluid bolus, or oxygen administration
    - Notifying obstetric and anesthesia care providers as needed
    - Provision of comfort and support and monitoring for pruritus
    - Assessing for sedation and level of motor blockade
3. Assessment and management of maternal side effects and complications
    - Assessing and managing presence and severity of itching (pruritus)
    - Notifying anesthesia care provider if pruritus develops
    - Monitoring for nausea, vomiting and blood pressure, preventing aspiration if vomiting occurs
    - Assessing and managing symptoms of postdural puncture headache
    - Assessing and managing urinary retention and bladder distention, performing catheterization if necessary
    - Assessing and managing signs of intravascular injection following anesthesia and initiating emergency care procedures as needed
4. Assessment of anesthesia effects on labor progress
5. Postanesthesia care
    - Monitoring blood pressure and pulse
    - Removal of the epidural catheter and documentation of removal
    - Discharge when patient's condition is stable

6. Care of the newborn

Major Outcomes Considered

Potential maternal–fetal side effects of medications used for obstetric regional analgesia

Methodology

Methods Used to Collect/Select the Evidence

Hand-searches of Published Literature (Primary Sources)

Hand-searches of Published Literature (Secondary Sources)

Searches of Electronic Databases

Description of Methods Used to Collect/Select the Evidence

The original search, conducted using Internet Grateful Med, MEDLINE, and the Cumulative Index of Nursing and Allied Health Literature (CINAHL) databases, was limited to articles in English published between 2000 and 2009. Articles were also selected from the Cochrane Library. Articles reporting the results of a variety of clinical trials, review articles, and reports of case studies were reviewed and scored. Duplicate citations were identified and eliminated. Additional searches and articles, including selected articles before 2000 and those published through April 2011, were retrieved and scored based on knowledge of critical works.

The original literature search strategy for this revision included identification of citations in which any one of the following terms appeared:

- Advanced cardiac life support (ACLS) in obstetrics
- AIDS and anesthesia
- Carbon dioxide monitoring
- Cesarean care
- Culture
- Electrocardiogram (EKG) monitoring after general anesthesia
- Fetal response and assessment
- Intravascular infusion of a lipid emulsion
- Labor progress
- Labor with fetal demise
- Liability and closed claims
- Lumbar tattoo
- Maternal physiologic response
- Maternal psychosocial, emotional, and cultural support
- Maternal response and assessment
- Obesity and anesthesia
- Neonatal response and assessment
- Patient-controlled analgesia (PCA) and patient-controlled epidural analgesia (PCEA), intrapartum and postpartum
- Preanesthesia preparation
- Sleep apnea and anesthesia
- Vaginal birth and anesthesia

Additional literature reviewed included guidelines and position statements from the following professional organizations: American Association of Nurse Anesthetists (AANA), American Society of Anesthesiologists (ASA), Society of Obstetrical Anesthesia Providers, American College of Obstetricians and Gynecologists (ACOG), and the Association of Women's Health, Obstetric and Neonatal Nurses (AWHONN). *Guidelines for Perinatal Care*, published by the American Academy of Pediatrics (AAP) and ACOG, and guidelines published through Canadian organizations were also included in the initial review.

Limited, topic-specific secondary searches were carried out based on identified gaps in the literature. The stipulation for these search parameters was that the topic terms be present in the body of the article.

Number of Source Documents

Not stated

Methods Used to Assess the Quality and Strength of the Evidence

Weighting According to a Rating Scheme (Scheme Given)

Rating Scheme for the Strength of the Evidence

Quality-of-Evidence Rating

I: Evidence obtained from at least one properly designed randomized controlled trial or meta-analysis of randomized controlled trials.

II-1: Evidence obtained from well-designed controlled trials without randomization.

II-2: Evidence obtained from well-designed cohort or case-control analytic studies, preferably from more than one center or research group.

II-3: Evidence from multiple time series with or without the intervention. Dramatic results in uncontrolled experiments (such as the results of the introduction of penicillin treatment in the 1940s) could also be regarded as this type of evidence.

III: Opinions of respected authorities, based on clinical experience, descriptive studies, or reports of expert committees.

The referenced rationale citations and quality-of-evidence ratings also include published clinical practice guidelines and recommendations from other professional associations or, in limited instances, from standard texts that represent established and accepted guidelines for management of obstetric analgesia/anesthesia. These recommendations are included for completeness but are identified as level-III evidence.

Methods Used to Analyze the Evidence

Review of Published Meta-Analyses

Systematic Review with Evidence Tables

Description of the Methods Used to Analyze the Evidence

Evaluation and Scoring

A system and tool for scoring the literature was developed based on the method for literature analysis presented in the American Nurses Association (ANA) *Manual to Develop Guidelines**. Using this framework, each study reviewed by the Guideline team was evaluated in the following eight categories:

- Problem or question studied: Clearly stated, significant, and relevant
- Sampling: Representative sampling, less than 20% dropout rate, and random selection process
- Measurement: Tools/methods appropriate, reliable, and valid
- Internal validity: Accurate conclusions about covariation
- External validity: Valid conclusions about generalizability
- Construct validity: Appropriate independent and dependent variables identified
- Statistical conclusion validity: Statistical significance supported by data ($p \leq 0.05$)
- Justification for conclusions: Causal conclusions justified

A description of the above criteria and a sample scoring tool can be found in the ANA *Manual**.

*Marek, K. (1995). *Manual to develop guidelines*. ANA Committee on Nursing Practice Standards & Guidelines. Washington, DC: American Nurses Publishing, American Nurses Foundation/American Nurses Association.

Methods Used to Formulate the Recommendations

Expert Consensus

Description of Methods Used to Formulate the Recommendations

The *Nursing Care of the Woman Receiving Regional Analgesia/Anesthesia in Labor Evidence-Based Clinical Practice Guideline* and *Quick Care Guide* were developed by the Evidence-Based Clinical Practice Guideline Development Team, which is comprised of Association of Women's Health, Obstetric and Neonatal Nurses (AWHONN) member experts. Team members were selected for guideline development by AWHONN for their expertise as scientists and clinicians dedicated to improving the health and well-being of women and newborns.

The process for guideline development described herein is the result of the combined efforts of AWHONN's Practice, Research, and Education committees originally undertaken in 1998 using the framework presented in the American Nurses Association (ANA) *Manual to Develop Guidelines**.

Team members participated from 2009 through early 2011 in teleconferences, literature review, evaluation and scoring of research articles, and revision of the Evidence-Based Clinical Practice Guideline. Consensus was used to delimit the multidisciplinary literature reviewed and accepted for use in this Guideline.

*Marek, K. (1995). *Manual to develop guidelines*. ANA Committee on Nursing Practice Standards & Guidelines. Washington, DC: American Nurses Publishing, American Nurses Foundation/American Nurses Association.

Rating Scheme for the Strength of the Recommendations

Not applicable

Cost Analysis

A formal cost analysis was not performed and published cost analyses were not reviewed.

Method of Guideline Validation

External Peer Review

Internal Peer Review

Description of Method of Guideline Validation

Not stated

Evidence Supporting the Recommendations

Type of Evidence Supporting the Recommendations

The type of supporting evidence is identified and graded for each recommendation (see the original guideline document for referenced rationale and specific quality of evidence ratings for each recommendation).

Benefits/Harms of Implementing the Guideline Recommendations

Potential Benefits

- Appropriate and safe nursing care for women receiving regional analgesia/anesthesia in labor
- Supportive nursing care and ongoing nursing assessments may minimize development of untoward effects of regional analgesia/anesthesia and facilitate communication between the anesthesia and obstetric care providers and the woman.

Potential Harms

- Lateral position may be associated with decreased maternal cardiac output.
- Inadvertent intravascular injection of anesthetic or analgesic medications
- Hypotension
- Postdural puncture headache
- Pruritus

Qualifying Statements

Qualifying Statements

- The Association of Women's Health, Obstetric and Neonatal Nurses (AWHONN) is accredited as a provider of continuing nursing education by the American Nurses Credentialing Center's (ANCC's) Commission on Accreditation. Accredited status does not imply endorsement by AWHONN or ANCC of any commercial products displayed or discussed in conjunction with this activity.
- AWHONN requires authors and planners to identify investigational products or off-label uses of products regulated by the U.S. Food and Drug Administration at first mention and whenever appropriate in the content. This Guideline includes information about chlorhexidine in alcohol solution used as a skin preparation for neuraxial anesthesia. Its use for this purpose is considered off-label.
- This Evidence-Based Clinical Practice Guideline was developed for AWHONN, as an informational resource for nursing practice. The Guideline does not define a standard of care, nor is it intended to dictate an exclusive course of management. It presents general methods and techniques of practice that AWHONN believes to be currently and widely viewed as acceptable, based on current research and recognized authorities.
- Proper care of individual patients may depend on many individual factors to be considered in clinical practice, as well as professional judgment in the techniques described herein. Variations and innovations that are consistent with law and that demonstrably improve the quality of patient care should be encouraged. AWHONN believes the drug classifications and selections set forth in this text are in accordance with current recommendations and practice at the time of publication. However, in view of ongoing research, changes in government regulations, and the constant flow of information relating to drug therapy and drug reactions, the reader is urged to check information available in other published sources for each drug for potential changes in indications, dosages, warnings, and precautions. This is particularly important when a recommended agent is a new or infrequently employed drug. In addition, appropriate medication use may depend on unique factors such as individuals' health status, other medication use, and other factors that the professional must consider in clinical practice. The information presented here is not designed to define standards of practice for employment, licensure, discipline, legal, or other purposes.
- The Evidence-Based Clinical Practice Guideline Development Team has examined this body of research within the parameters described in the introduction to identify evidence to support the clinical practice recommendations presented in the Guideline. However, relatively little clinical nursing research has focused on the care of women receiving regional analgesia during labor, thus many of the studies reviewed were conducted by anesthesiologists. Consequently, many of the recommendations for nursing care included in the Guideline were extrapolated from findings reported in the anesthesia literature, rather than from nursing research. The Guideline Development Team has identified both the lack of nursing research and the paucity of randomized clinical trials related to obstetric regional analgesia assessment and management as limitations of this Guideline. The nursing care recommendations for regional analgesia/anesthesia during labor were predominately based on studies and reports concerning the physiologic effects of analgesic/anesthetic agents; descriptions of effects, side effects, and adverse reactions associated with regional analgesia; and treatments or other interventions used to counteract undesired anesthesia effects.
- Although the literature selected for guideline development was considered adequate to offer several specific nursing observations and interventions, some of the studies reviewed revealed disparate or inconclusive results concerning important patient care issues. The Guideline

Development Team also reviewed literature related to emerging obstetric anesthesia management considerations. The Guideline Development Team noted several important clinical concepts for which recommendations were not offered or consensus does not exist, that may be considered controversial, or that reflect emerging research.

- This Guideline presents general guidance based on literature and good practice. However, good care requires nurses and other health professionals to exercise clinical judgment based on a variety of factors, including the specific health status, characteristics, history and condition of the patient.

Implementation of the Guideline

Description of Implementation Strategy

An implementation strategy was not provided.

Implementation Tools

Quick Reference Guides/Physician Guides

Staff Training/Competency Material

For information about availability, see the *Availability of Companion Documents* and *Patient Resources* fields below.

Institute of Medicine (IOM) National Healthcare Quality Report Categories

IOM Care Need

Getting Better

Staying Healthy

IOM Domain

Effectiveness

Patient-centeredness

Safety

Identifying Information and Availability

Bibliographic Source(s)

Association of Women's Health, Obstetric and Neonatal Nurses (AWHONN). Nursing care of the woman receiving regional analgesia/anesthesia in labor. Second edition. Evidence-based clinical practice guideline. Washington (DC): Association of Women's Health, Obstetric and Neonatal Nurses (AWHONN); 2011. 69 p. [177 references]

Adaptation

Not applicable: The guideline was not adapted from another source.

Date Released

2001 Jan (revised 2011)

Guideline Developer(s)

Association of Women's Health, Obstetric, and Neonatal Nurses - Professional Association

Source(s) of Funding

Publication of this guideline was supported through an educational grant from Stryker Medical.

Guideline Committee

2009-2011 Anesthesia Evidence-based Clinical Practice Guideline Development Team

Composition of Group That Authored the Guideline

2009-2011 Anesthesia Evidence-based Clinical Practice Guideline Development Team: Kathleen Rice Simpson, PhD, RNC, FAAN (*Science Team Leader*); Sandra K. Cesario, PhD, RNC, FAAN (*Project Manager*); Dwayne L Accardo, CRNA, DNP; Patricia A. Creehan, MSN, RNC; Nancy O'Brien-Abel, MN, RNC-OB; Judith H. Poole, PhD, RNC; Anne Santa-Donato, MSN, RNC

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Financial Disclosures/Conflicts of Interest

The Association of Women's Health, Obstetric and Neonatal Nurses (AWHONN) requires authors, planners, and reviewers in a position to control content of an Evidence-Based Clinical Practice Guideline to disclose all relevant financial relationships with any commercial interest. The authors, reviewers and nurse planners for this Evidence-Based Clinical Practice Guideline disclosed no relevant financial relationships that might create a conflict of interest. The nurse planners have taken measures to mitigate the risk of commercial bias by participating in development and review of the Evidence-Based Clinical Practice Guideline and by developing its associated continuing education activity.

Guideline Status

This is the current release of the guideline.

This guideline updates a previous version: Association of Women's Health, Obstetric and Neonatal Nurses (AWHONN). Nursing care of the woman receiving regional analgesia/anesthesia in labor. Evidence-based clinical practice guideline. Washington (DC): Association of Women's Health, Obstetric and Neonatal Nurses (AWHONN); 2001 Jan. 36 p. [72 references]

Guideline Availability

Electronic copies: Not available at this time.

Print copies: Available by contacting the Association of Women's Health, Obstetric and Neonatal Nurses (AWHONN), 2000 L Street, N.W. Suite 740, Washington, D.C. 20036; Phone: (800) 354-2268; Web site: www.awhonn.org/store .

Availability of Companion Documents

The following is available:

- Care of the woman receiving regional analgesia/anesthesia in labor. Quick care guide. Washington (DC): Association of Women's Health, Obstetric and Neonatal Nurses (AWHONN); 2011. 2 p.

Electronic copies: Not available at this time.

Print copies: Available by contacting the Association of Women's Health, Obstetric and Neonatal Nurses (AWHONN), 2000 L Street, N.W. Suite 740, Washington, D.C. 20036; Phone: (800) 354-2268; Web site: www.awhonn.org.

Also, the appendices of the original guideline document contain a continuing nursing education credit application, a participant feedback tool, and post-test questions.

Patient Resources

None available

NGC Status

This NGC summary was completed by ECRI on April 9, 2002. The information was verified by the guideline developer on June 7, 2002. This NGC summary was updated by ECRI Institute on June 8, 2012. The information was verified by the guideline developer on July 19, 2012. This summary was updated by ECRI Institute on March 6, 2014 following the U.S. Food and Drug Administration advisory on Over-the-Counter Topical Antiseptic Products. This summary was updated by ECRI Institute on June 2, 2016 following the U.S. Food and Drug Administration advisory on Opioid pain medicines.

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